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INVESTIGATIONS IN THE LAKE CHAMPLAIN BASIN, 1985

RICHARD D. SMITH
P.O. Box 106, Rocky Hill, New Jersey 08553, U.S.A.

INTRODUCTION

In July 1985, Wind & Whalebone Media Productions continued its investigation into the matter of large unknown animals reported in Lake Champlain, said to be "Loch Ness-like animals," and popularly referred to as Champ. This season's research was a continuation of fieldwork begun last year (see Richard D. Smith, 1984, Testing an Underwater Video System at Lake Champlain, *Cryptozoology*, Vol. 3: 89–93).

The research methodology continued to be guided by considerations of the reported animals' three-dimensional, "drowned valley" habitat, with emphasis on introducing probes into sectors where contact with such animals is deemed most likely to occur. This fieldwork also continues to integrate basin soundings, survey location, and underwater video deployment, in order to yield results as definitive and repeatable as possible.

The specific intent of the 1985 work at Lake Champlain was: (1) to employ a chart recording sonar device operated from a boat, in order to obtain records of bottom contours, as well as the presence of fish and any larger aquatic animals; (2) to cross-reference the sonar chart data with navigational and bathymetric charts by taking position sightings from the boat during operations; (3) to deploy and test a newly designed underwater video system, and to make underwater hydrophone sound recordings; (4) to gather any data of use to professional ichthyologists, geologists and limnologists; (5) to gather any information on previously unrecorded sightings of Champ, and to relay this information to the Lake Champlain Phenomena Investigation (LCPI) (see Joseph W. Zarzynski, 1984, LCPI Work at Lake Champlain, 1984, *Cryptozoology*, Vol. 3: 80–83).

Wind & Whalebone fieldwork at Champlain in 1985 consisted of 24 days on site, with 12 days spent on water in data-gathering operations, with the remaining period spent on equipment preparation and repair, resupply, travel, interviews, and miscellaneous down time.

Exercises were coordinated by the author. Joining him on site and assisting in operations were Wendy Lathrop (July 12–20), Ike and Lois Blonder (July 21–26), and Gary Mangiacopra (July 21–26). Important logistical support was provided by John Andrews, Robert and Barbara Beach, the John Durant family, Dennis Hall, Phil Keller, and Ed Parsons.

Joe Zarzynski, LCPI director, visited our base at Essex, New York, on July 19 and 25. Mr. Zarzynski shared valuable information and insights, as did Mr. Blonder, who is a board member of the Academy of Applied Science

and a veteran of the Academy's Loch Ness work, and Mr. Mangiacopra. Although Wind & Whalebone's lake research is not supported by the LCPI or AAS, the author is grateful to have participated in a cooperation between individuals sharing common goals in this area of cryptozoological research. Acknowledgement is made of the additional support of Robert Durant and Margaret Light of this season's work.

NARRATIVE DESCRIPTION

Basin sounding work was carried out utilizing an Apelco MR-201C indicating and recording sonar, manufactured by the Raytheon Corporation. Sonar has been used previously in efforts to ascertain the presence of large, unknown animals in Lake Champlain, as well as Loch Morar, and, most notably, Loch Ness.

Sonar soundings were carried out this season in the Champlain basin at the following locations: off Essex, New York (July 7 and 16); Whallon Bay vicinity (July 8, 18, 22 and 23); at the mouth of Willsboro Bay (July 10); north of Willsboro Point (July 17); in the channel west of Valcour Island (July 11); and off Scotch Bonnet, south of Basin Harbour, Vermont (July 13, 14 and 24). Hydrophone recordings were made during the last three sessions in Whallon Bay.

The Scotch Bonnet work centered around the site of a fairly recent report of a Champ animal, to which the author was first alerted by Joe Zarzynski. Peg McGeoch and Jane Temple claimed to have observed this animal at around 4:00 p.m. on June 29, 1985, from the porch of a vacation cottage which they were housesitting, and which overlooked the lake.

The July 24 session involved having the two eyewitnesses separately direct the chart recorder boat (via two-way walkie-talkie radio communication) over the path each recalled the animal as having taken, and at the same speed. Three passes were made under each woman's direction, two in the original heading, and one reversing. In addition, the women were each asked on one pass to note where they remembered seeing the animal surface and submerge. These locations were marked on the chart at the moment they were given. To the author's knowledge, an examination of an eyewitness account of a large, unknown aquatic animal has not previously been made in this manner.

During all of the season's boat operations, sightings on prominent shoreline topographical features were periodically taken with a sighting compass, particularly when chart recordings of interest were being noted. The position of these surface features was measured in degrees off magnetic north, for later comparison with navigational charts, and also to allow maintenance of a particular course, or relocation of a particular position during actual operations.

Small boats (14 feet and under) were used. Although some were powered

by outboard gasoline motors, during actual sonar use the boats were, with only a few exceptions, rowed, propelled by an electric trawling motor, or allowed to drift. Noise was thus reduced during sonar operations in order to minimize possible avoidance behavior by the target animals.

As much as weather conditions, boat availability, and other factors would allow, an effort was made to undertake sonar operations at different times of day, ranging from morning to darkness, to see if time was a factor in obtaining results.

Surface watching was not emphasized during expedition activities, though still cameras and binoculars were carried by the author and some group members when on or near the lake in the event of a sighting.

A new camera system, built by David Olsen, was brought to the site for testing. It is based around a GBC-1405 low-light, black and white video camera, and powered by a 12-volt DC to 110-volt AC inverter system. However, a faulty Vidicon picture tube was noted during final system bench testing prior to deployment. Tube replacement on site was impractical, so camera trials were canceled for this season.

Results

The sonar equipment functioned well during the season's work. Some inconvenience was noted during chart paper refill and realignment, and during unit operations at depths right at the thresholds of the automatic phase shifting function (50, 100, 150 feet, etc.), when the continuous bottom tracing would intrude at the top of the chart. Otherwise, this simple unit was well suited for the work.

Numerous bottom features and contours were recorded. Navigational location confirmed that the unit succeeded in recording the deepest section of the Champlain central trough, published on National Oceanic and Atmospheric Administration (NOAA) chart 14783 as 399 feet. Although the unit recorded this basin depression, the depth exceeded its capability for relative scale measurement.

Navigational sightings were successfully taken and used, although refined sighting devices would have yielded quicker and more precise readings.

Sonar chart markings consistent with significant fish activity were frequently obtained, particularly at locations (near submerged shelves and rock outcroppings) and at times (just before and after dusk) predicted in ichthyological and sport fishing literature. Conditions did not allow late night or early dawn sessions this season.

Larger mid-water echoes were recorded on three occasions (July 8, 13 and 18). Although none may be said at this time to represent contacts with large, unknown animals, they merit further investigation, and have been submitted—along with other representative chart recording data from our season—

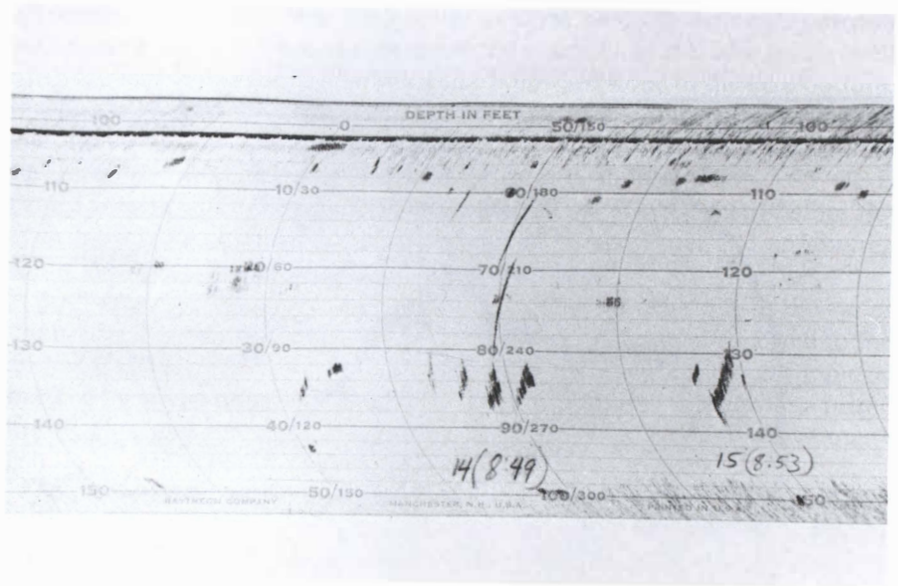

FIG. 1.—A section of sonar chart from the evening of July 18, 1985. The boat was in approximately 105 feet of water, north of Whallon Bay, virtually stationary with little drift. The solid dots and streaks at the top of the chart probably represent fish. The larger marks near the bottom were from reflections at 80 feet plus, as confirmed by observation of the strobe light depth dial. These are of interest, as they are heavy marks ranging near vertically six feet (8:49) and diagonally ten feet (8:53). A weak bottom reflection, possibly from silt, is seen both at the bottom of the chart (range 1, phase 2) and at the top (range 1, oncoming phase 3).

to sonar experts for their comments (Figs. 1 and 2). Hydrophone recordings were successfully made, but yielded no unidentifiable sounds.

No visual sightings of large, unidentified lake animals were made by the expedition. However, information on previously unrecorded sightings was obtained and transmitted to LCPI. An attempt was made to capture a fish (that may have displayed signs of lamprey predation) for its examination by ichthyologists, but the attempt was unsuccessful.

The examination of the McGeoch/Temple sighting at Scotch Bonnet was a first effort of its type but it was hampered by wind and rough water (which made precise shore feature reference sightings difficult), and by the need to divide several tasks (boat handling, boat-to-shore communications, sonar operation, navigational sightings, and note taking) among only two people. However, the experiment yielded significant results.

Although the two women directed the boat separately and without discussion (in fact, Ms. Temple arrived only at the end of the final pass under Ms. McGeoch's direction), and along the course several times, they were

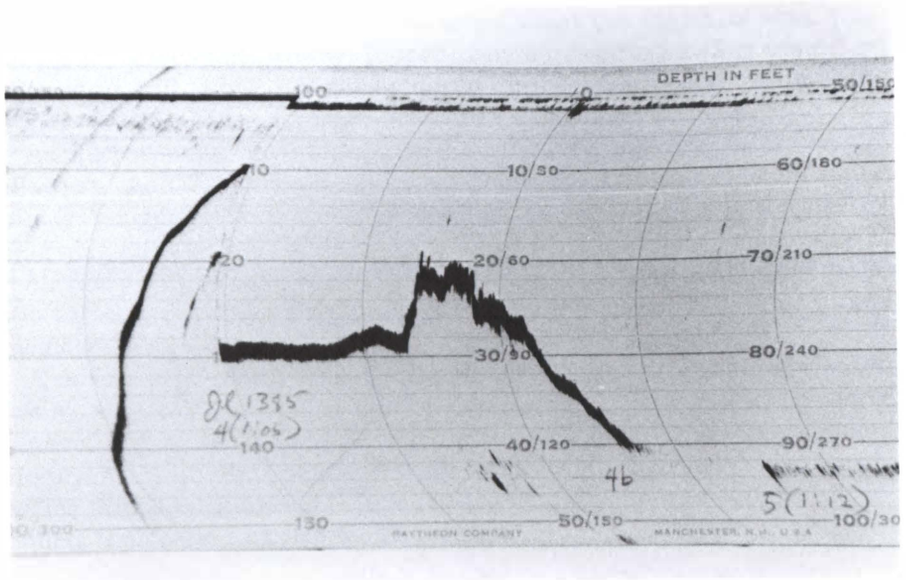

FIG. 2.—A section of sonar chart from July 13, 1985. The boat was under power, headed south past Scotch Bonnet, over a course taken from the Champ sighting of June 29, reported by McGeoch and Temple. The thinner mark on the left shows the rapid decrease in depth from well over 150 feet to 30 feet coming in from the central lake channel. This recording was made at the sonar unit's extreme depth range 3 setting (phase 1). The unit was reset to range 1, showing a plateau feature at 30 feet depth suddenly interrupted by a ten-foot-high rock outcropping. The bottom fell off quickly, so that the signal was temporarily lost, but reestablished at 43 feet.

highly consistent in their positioning of the course and surfacing locations (based on records of the bottom sections being passed over and on what additional surface position sightings could be made from the boat), and in their estimates of the animal's swimming speed (based on motor throttle settings during the experiment; Ms. Temple requested a slightly higher speed). The results of the experiment lend considerable credibility to their report.

It is regrettable that precise measurements of course length against time could not be taken, due to surface conditions and personnel limitations. So, unfortunately, the animal's speed could not be calculated with any accuracy. This problem could be solved in the future by shore use of the new generation of electronic distance measurement (EDM) survey instruments. The swimming speed of the animal reported at Scotch Bonnet, based on the July 24 work, is here subjectively described as a very fast human walking or medium jogging pace.

The sonar records made during all three sessions at Scotch Bonnet (the first two were not under the direction of the eyewitnesses, but based on their

accounts) clearly show that the animal's course past the women's position would have taken it from the deep central channel of the lake basin (well over 200 feet in this area), towards a sharp upward slope in the lake bottom, to a plateau feature (correspondingly, with water depth diminishing rapidly), and, finally, over a reef-like submerged rock outcropping (here the animal surfacing and swimming south, parallel to and approximately 225 yards from shore in comparatively shallow water, 10 to 20 feet deep) before the eyewitnesses lost sight of it (submerging for the last time, and continuing south in depths gradually increasing from 40 feet).

Both eyewitnesses were most definite about the vertical, out-of-the-water undulations of this particular animal. Local sport fishermen reported to the author that the "reef" of Scotch Bonnet (a sharp line of rock outcroppings, marked by navigational warning buoy C"25" in nine feet of water) is a prime fishing area, and chart recording in the area confirmed the presence of many fish.

The tentative hypothesis proposed is that the animal observed was chasing fish over the submerged ledge and rock outcropping features. Its surfacing during this time would be consistent with its need to clear the bottom, if it were a large animal moving in vertical undulations, and/or to momentarily reduce surface drag and thus quickly gain speed for the chase.

The significant matter of the animal's method of detecting the oncoming sharp rise in the bottom (vision? touch? learning? sonar?) is open to speculation. No attempt at explanation is made here.

It should be noted that no feeding behavior was specifically observed, although Ms. Temple reported a side-to-side movement when the animal was underwater, which might be related to predation upon a rapidly dispersing aggregation of fish. Also, the above hypothesis would by no means explain all reported surfacings of such large, unknown lake animals. However, the examination of a claimed route does address important behavioral issues which have remained tertiary, in much of the literature, to proof of existence and classification of type.

This season's work enabled us to gain valuable experience in sonar use and interpretation, small boat handling, and familiarity with lake environs. It is hoped to extend this experience to deployment of the new video camera. As modifications had already been planned for the system, its malfunction this season was not a major set-back.

FUTURE PLANS

The author plans further research along the above lines. Emphasis will be given to upgrading the quality of sonar and topographical survey equipment, and the techniques used. Investigations related to Lake Champlain's ecosystem will be undertaken, as it is assumed that the Champ animals, if they exist, are at or near the top of the lake's food chain.